Attachment 2
(Revised at the August 18, 2008 meeting)

CALPERS RISK REPORTS

Overview

The Risk Management Unit monitors the risk of the CalPERS fund. Risk in this context is reported as standard deviation which is a statistical measure of the degree to which asset returns vary over time. Risk is monitored in terms of both total risk and tracking error. Total risk is the annualized standard deviation of the asset returns over time. Tracking error is the annualized standard deviation of the difference between the total return of the portfolio and the total return of the benchmark over time, or the volatility of the active returns.

CalPERS Forecast Total Risk (Attachment 3)

This report shows forecast total risk for each asset class and the total fund. The CalPERS Risk Measurement System (RMS) forecasts total risk over the next year for the portfolio holdings and benchmark holdings. The risk assumptions used in the Asset/Liability Management Workshop in fall 2007 are reported in the last column. Portfolio risk will generally track benchmark risk more closely for the liquid asset classes than for the illiquid asset classes (Real Estate, AIM and Inflation Linked). The larger difference for the illiquid asset classes is primarily due to the difficulty of defining accurate benchmarks. It is noteworthy that the risk of the individual asset classes is for the most part larger than the risk of the total fund. The lower risk of the total fund is due to the diversification benefits of combining assets with differing risk characteristics. The graph shows the time series history of forecast risk for the total fund portfolio looking one year into the future. The portfolio risk forecasts are based on a snapshot of the holdings at that particular time. The realized portfolio risk is also shown based on the subsequent twelve months of total fund returns. Each portfolio risk forecast is based on the fund holdings at that time.

CalPERS Total Fund Tracking Error (Attachment 4)

This report summarizes the components of the total fund tracking error. Tracking error arises from two active management decisions: asset allocation at the asset class level, and security and sector selection within asset classes. The table shows the underweight or overweight for each asset class compared to its target allocation. RMS forecasts the tracking error based on these active allocation weights. The asset allocation policy risk budget is 75 basis points and the June 30, 2008 forecast tracking error due to asset allocation is 55 basis points.

Security/sector selection risk is evaluated at the asset class level based on the realized (annualized) tracking error over three years for each asset class. The realized tracking error is presented along with the RMS tracking error or active risk forecast, which captures security and sector selection that vary from the policy benchmark for each asset class.

Lastly, security/sector selection and asset allocation active risk are combined to create an overall tracking error risk budget for the total fund of 150 basis points. The most recent RMS forecast of total fund tracking error is 108 basis points. The graph shows that total fund forecast tracking error has historically varied between 60 and 120 basis points.

Additional Risk Information

The above reports present risk information at the total fund and asset class levels. Risk Management Unit staff (Staff) also monitors risk at the individual account level.

Staff is also working to effectively monitor other sources of risk – derivatives, counterparty, currency and leverage. The key to these efforts is obtaining accurate data. RMS is currently able to capture approximately 90% of CalPERS derivative holdings. Staff evaluates derivatives risk by using RMS to forecast risk both with and without derivative holdings, and comparing the differences. Staff also monitors counterparty risk based on this derivatives holdings data. We are evaluating the implementation of a more comprehensive assessment of counterparty risk based on improved data. Staff is also working on reporting the risk impact to the fund of the currency overlay program. Lastly, Staff is working to develop a measure of total fund leverage. Our focus is in capturing leverage within the illiquid asset classes.